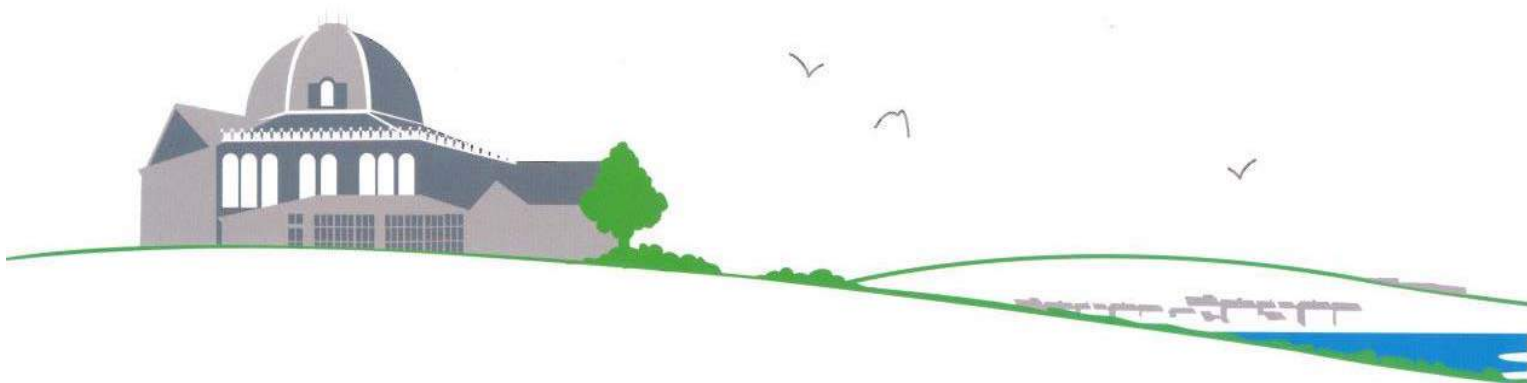




JACOBS

CLITHEROE

EXTENDED PHASE 1 HABITAT SURVEY REPORT



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EXTENDED PHASE 1 HABITAT SURVEY REPORT

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August 2018

This project has been undertaken in accordance with PAA policies and procedures on quality assurance.

Signed: _____



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1. INTRODUCTION

Background

- 1.1 Penny Anderson Associated Ltd (PAA) was commissioned in August 2018 by Jacobs to conduct an Extended Phase 1 habitat survey of land at Clitheroe (centred on Grid Ref SD 744 430). The survey is required to support a planning application for a project to develop a new demonstration facility on an existing manufacturing site owned by Jacobs' client, Johnson Matthey, in Clitheroe. The demo plant will be constructed on an area of their manufacturing site which is currently used for car parking.
- 1.2 This report presents the findings of the Extended Phase 1 habitat survey, including the desk study results and methodologies used, and highlights any ecological constraints and opportunities associated with proposed development of the site.
- 1.3 In addition, a Habitat Suitability Index (HSI) assessment was carried out for an off-site pond located approximately 200m south of the proposed development site to assess its suitability to support great crested newts (GCN, *Triturus cristatus*).

Legislative Context

- 1.4 The text given below provides a brief summary of the legislation in relation to sites and species or species group in England and Wales. The original Acts, Regulations and any amendments should be referred to for the precise wording. Addition text in relation to individual species/species groups is presented in Appendix 1.
- 1.5 A range of international and national legislation has been established in the UK to protect important nature conservation sites and priority species. At the international level, European Union (EU) Directives require individual member states to implement their conservation provisions nationally for the benefit of Europe as a whole. These Directives have been transposed into UK law by the Conservation of Habitats and Species Regulations 2017¹; further details can be obtained from the Joint Nature Conservation Committee (JNCC) website at www.jncc.defra.gov.uk.
- 1.6 Other international conventions include: the Bern Convention on the Conservation of European Wildlife and Natural Habitats (1979), which requires the maintenance of populations of wild flora and fauna, giving particular protection to endangered and vulnerable species; and the Bonn Convention on the Conservation of Migratory Species of Wild Animals (1979), which requires the protection of migratory species throughout their entire range. The above conventions are implemented in England and Wales via the Wildlife and Countryside Act (WCA) 1981 (as amended) and Countryside and Rights of Way (CROW) Act 2000. This legislation also protects important habitats and sites such as Sites of Special Scientific Interest (SSSI).
- 1.7 At the national level, the UK Post-2010 Biodiversity Framework published in 2012 is the Government's response to the Convention on Biological Diversity (2010). It describes the UK's

1 Please note: the text provides a brief summary of the legislation in England and Wales and the original Acts and any amendments should be referred to for the precise wording.

biological resources, commits a detailed plan for the protection of these resources within the UK's devolved framework across England, Wales, Scotland and Northern Ireland. The document identifies future priorities for nature conservation and adopts a more strategic approach, including ecosystem services and sustainability alongside biodiversity. Despite administrative changes following devolution, there is still an underlying objective of protecting and enhancing a range of priority species and habitats, often still based on the objectives and classifications of the original UK Biodiversity Action Plan. *Biodiversity 2020* is England's national biodiversity strategy. Building on the *Natural Environment White Paper* published in 2011, this provides a means of delivering the international and EU commitments to biodiversity. Under Biodiversity 2020, Priority Species and Habitats referred to are those of 'Principal Importance' for the conservation of biodiversity in England listed on Section 41 (England) of the Natural Environment and Rural Communities (NERC) Act 2006.

1.8 Finally, the National Planning Policy Framework (NPPF), updated in 2018, provides guidance for local authorities on the content of the Local Plans and is a material consideration in determining planning applications. The NPPF has replaced much existing planning policy guidance, including Planning Policy Statement 9: Biological and Geological Conservation. Briefly, with an overall focus on sustainable development, the NPPF states that developments should aim to engender positive outcomes for biodiversity, with a particular focus on the maintenance and creation of ecological networks. Furthermore, the NPPF also states that any planning proposals for which significant negative impacts on biodiversity cannot be avoided, mitigated or compensated should be refused. Biodiversity 2020 Priority Species are also referred to as 'species of principal importance' for the conservation of biodiversity in England within Section 74 of the CRow Act 2000, and Sections 41 (England) of the NERC Act 2006. The NPPF states that the planning system should contribute to and enhance the natural environment through a range of actions, including:

- protecting and enhancing valued landscapes, geological interests and soils;
- recognising the wider benefits of ecosystem services; and
- minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.

2. METHODS

Desk Study

- 2.1 A data request was made to the Lancashire Environmental Record Network (LERN) in August 2018 to provide information on protected and notable species and non-statutory designated sites within 2km of the centre of the site.
- 2.2 An internet search of the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.natureonthemap.naturalengland.org.uk) was made for European designated sites within 5km of the site and for SSSI and priority habitats and species within 2km.

Field Survey

Extended Phase 1 Habitat Survey

- 2.3 An Extended Phase 1 habitat survey of the site was undertaken on 9th August 2018 by Sacha Rogers (CEnv, MCIEEM²). The survey method followed the standard JNCC (2010) technique for classifying and mapping British habitats. The survey aimed to provide a record of habitats that are present within the site and to further investigate those that are likely to be ecologically important.
- 2.4 The survey was 'extended' (Institute of Environmental Assessment 1995) to include a general assessment for the presence or potential presence of protected species, noting any areas of suitable habitat and the location and type of any field signs recorded. In particular, this component of the field survey focused on the following species: badger (*Meles meles*), bats, reptiles, amphibians, breeding birds and terrestrial invertebrates.
- 2.5 A botanical species list and DAFOR rating was compiled for those plant species which were readily identifiable on the day of survey.

Habitat Suitability Index Assessment

- 2.6 The survey included a HSI assessment of a single off-site pond for its potential to support great crested newts (Oldham *et al.* 2000; ARG 2010).
- 2.7 The pond is located approximately 200m to the south of the site with habitat connectivity to the site. The HSI assessment was conducted by carrying out a visual inspection of the pond to record various physical and ecological characteristics which were later used to calculate an overall HSI 'score'.
- 2.8 The overall HSI score is calculated by allocating individual scores to a range of factors that reflect the potential suitability of a waterbody to support GCN. These include the geographical location of the waterbody, the number of waterbodies within 1km, and characteristics recorded in the field comprising: surface area and permanence, biological water quality, shading, presence of fish and birds, coverage of macrophytes and the suitability of surrounding terrestrial habitat.

² Full Member of the Chartered Institute of Ecology and Environmental Management (CIEEM)

- 2.9 The resulting HSI score cannot be used to confirm the presence of GCN and it should not be used as a substitute for a full survey where one is needed. However, the score ranges from 0 (completely unsuitable) to 1 (highly suitable) and represents a useful tool when considering the potential of a site to support GCN, and the need for further more detailed investigation.
- 2.10 Oldham *et al.* (2000) has related the HSI to the probability that a particular waterbody will support GCN, and Brady (2006) expressed qualitatively the suitability of different categories of HSI score (Table 1).

Table 1 GCN Habitat Suitability Index Categories and Likelihood of GCN Presence (after Oldham *et al.* 2000 and Brady 2006)

HSI Scores	Probability of Supporting GCN
<0.5	Poor
0.5 – 0.59	Below average
0.6 – 0.69	Average
0.7 – 0.79	Good
> 0.8	Excellent

Survey Constraints

- 2.11 The Extended Phase 1 habitat survey was undertaken during suitable weather conditions at an optimal time of year and all parts of the site were accessible on the day of survey. There were, therefore, no constraints to the survey.

3. RESULTS

Desk Study

- 3.1 The results of the desk study are summarised below.

Designated Sites

Statutory Designated Sites

- 3.2 Statutory designated sites include all tiers of nature conservation sites that are legally protected, including SSSIs, Local and National Nature Reserves, Special Areas of Conservation (SAC) and Special Areas of Protection (SPA).
- 3.3 There are no European designated sites within 5km search area.
- 3.4 There are four statutory designated sites within the 2km search area. These are Cross Hill Quarry Local Nature Reserve (LNR) which is located c.100m north of the site, Coplow Quarry SSSI, Salthill and Bellmanpark Quarries SSSI, and Salthill LNR (overlaps the portion of the SSSI of the same name) which are located 270m east and 750m south east of the site, respectively.
- 3.5 Cross Hill Quarry LNR is a mosaic of woodlands and grasslands managed by the Wildlife Trust for Lancashire Manchester & North Merseyside, of interest for its geological formations and botanical diversity.
- 3.6 Coplow Quarry SSSI and Salthill Quarry SSSI are designated for their geological interest, and Salthill Quarry LNR is also of interest for its botanical species assemblage.

Non-statutory Designated Sites

- 3.7 There are 14 locally designated Biological Heritage Sites (BHS) which are the Lancashire version of Local Wildlife Sites within the 2km search zone, the closest being Cross Hill Quarry LNR (described above).
- 3.8 Other nearby BHS are the River Ribble which is adjacent to Cross Hill Quarry LNR, c.200m to the west of the proposed development site, Coplow Quarry and Pimlico Road Grasslands BHS, Salthill Quarry BHS and Bellman Park Quarry BHS (described above as also designated as SSSI). The River Ribble and associated habitats support a diverse assemblage of plants and the river supports otter (*Lutra lutra*), water vole (*Arvicola amphibius*), sea trout (*Salmo trutta*) and Atlantic salmon (*Salmo salar*).
- 3.9 A map to show the location of all locally designated sites within the 2km search area is included in Appendix 2.

Priority Habitats

- 3.10 The MAGIC website identifies numerous woodland blocks within the 2km search area, including at Cross Hill Quarry LNR (described above), along the River Ribble and a belt of woodland immediately adjacent to the west of the proposed development site. A small patch (c.0.4ha) of 'lowland fen' habitat is located approximately 250m south of the proposed development site.

Protected Species

- 3.11 The following species records were provided for the 2km search area by LERN, unless stated otherwise.

Badger

- 3.12 There are three historic records of badger dating from 1994 - 96 and located over 1.5km from the site at Bellman Park Quarry and Bellman Farm Marsh (located c.1km to the east); there are no badger records from within or near the site itself.

Bats

- 3.13 There are a very large number of bat records in the search area, though none from within the site itself. Species recorded comprise common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*), Daubenton's bat (*Myotis daubentonii*) and one record of noctule (*Nyctalus noctula*) as well as 'un-named' bat species. The vast majority of the records are for common pipistrelle and Daubenton's which span the period 2005 - 2014 and are recorded at sites located between 1km and 1.4km away, at Waddington/River Ribble and in Clitheroe. Some of the pipistrelle records are for large numbers of bats, suggesting an important common pipistrelle roost site in Clitheroe. The closest of the more recent records to the site are of common and soprano pipistrelle, Daubenton's and noctule at Cross Hill Quarry LNR, approximately 470m north of the proposed development site dating from 2010. There are also older records of common pipistrelle and Daubenton's, also from Cross Hill Quarry and dating from 1991 located 381m from the site.

Other Mammals

- 3.14 There are three records for brown hare (*Lepus europaeus*) dating from 2013 and 2015 located c.1.4km north east of the site at Waddow Hall/Waddington. A further record from 2013 is from Brungerley located c.600m to the west.
- 3.15 Three records of West European hedgehog (*Erinaceus europaeus*) dating from 2010, 2013 and 2015 were provided for locations in Clitheroe, at 600m and 1.3km south of the site and from Waddington, some 1.4km to the north east.
- 3.16 Three historic records of water vole (assumed to be from the River Ribble) were provided from 1969, all located in Clitheroe, and ranging between 500m to 1.5km from the site.

Birds

- 3.17 A range of bird species records were provided within the 2km search area, though none from within the site itself. These comprise mainly passerine species e.g. hedge accentor (formerly dunnoek) (*Prunella modularis*), grey wagtail (*Motacilla cinerea*), lesser redpoll (*Carduelis cabaret*), meadow pipit (*Anthus pratensis*), mistle thrush (*Turdus viscivorus*) and some waders, e.g. oystercatcher (*Haematopus ostralegus*), redshank (*Tringa totanus*), curlew (*Numenius arquata*), northern lapwing (*Vanellus vanellus*). The only raptor record is for peregrine falcon (*Falco peregrinus*), dating from 1978-86, and located c.1.6km from the site. Many of the passerine and wader records originate at Cross Hill Quarry, Bellman Marsh Farm (a Biological Heritage Site, located c.1km east) and Salthill Quarry SSSI/LNR, with others from Clitheroe and the River Ribble. The range and location of bird species reflects the distribution of habitat types

and designated sites within the search area. The date range of records is wide, from the late 1970s to 2012.

Amphibians

- 3.18 There are no records of great crested newt or common toad (*Bufo bufo*) in the search area.

Reptiles

- 3.19 The only record of reptiles within the search area is a very old (1833) record of common lizard (*Zootoca vivipara*) from Clitheroe.

Terrestrial Invertebrates

- 3.20 Records of butterfly and moth species were provided, with the majority of records originating from Cross Hill Quarry LNR and from Salthill Quarry SSSI/LNR. These include brimstone (*Gonepteryx rhamni*), brown rustic (*Rusina ferruginea*), comma (*Polygonia c-album*), ghost moth (*Hepialus humuli*), ringlet (*Aphantopus hyperantus*), small heath (*Coenonympha pamphilus*) and wall brown (*Lasiommata megera*). There are no invertebrate records from the site itself.

Notable Plants

- 3.21 There are a large number of notable plant species records for the search area, many of which are associated with the nearby designated sites and include species typical of limestone grasslands such as bee orchid (*Ophrys apifera*), small scabious (*Scabiosa columbaria*) hairy violet (*Viola hirta*) and spindle (*Euonymus europaeus*) and also woodland habitats, e.g. common toothwort (*Lathraea squamaria*) and bluebell (*Hyacinthoides non-scripta*).

Invasive Plants

- 3.22 Japanese knotweed (*Fallopia japonica*) is present at Cross Hill Quarry LNR, with the nearest record being c.150m north of the site, dating from 2007.

Field Survey

- 3.23 The results of the field survey are summarised below. The scientific names of all plant species and fauna observed during the survey are listed in Appendix 3a and 3b and, for plant species, follow Stace 2010; common names only are used in this text. A map to show the location of habitats is presented in Figure 1.

General Description

- 3.24 The site comprises two areas of hardstanding separated by a tarmac access road, and various shipping containers, a metal clad building and a small fenced area for storage of materials in the northern 'triangular' shaped area. A large earth and rubble bund c.3m high and vegetated with tall ruderal vegetation forms the south west boundary of the triangular area. The bund is bounded (beyond the site boundary) by a belt of mature trees comprising ash, sycamore, white willow, copper beech, Swedish whitebeam, elder and beech.

- 3.25 The southern part of the site is roughly square in shape and bounded by existing buildings and plant to the south, east and west, with an access road and the 'triangular' shaped part of the survey area to the north.
- 3.26 The only semi-natural vegetation within the site comprises very small areas of species-poor semi-improved grassland at the edges of the site in places, and sparsely scattered ephemeral short perennial vegetation which has started to colonise the periphery of the hardstanding areas. The habitats and associated species are described in more detail below with plates (Appendix 4) to illustrate the key habitat characteristics.

Habitats

Species-poor Semi-Improved Grassland

- 3.27 Three very small, isolated patches of species poor semi-improved grassland are present in the northern 'triangular' shaped area. These comprise species typical of recently established grasslands and comprise frequent false oat-grass, creeping bent, red fescue and Yorkshire fog with occasional cock's-foot. Herbaceous species include common and widespread forbs including frequently occurring broadleaved dock, creeping thistle, creeping buttercup, selfheal, great willowherb, creeping cinquefoil and occasional to rare hop trefoil, silverweed, wood avens, soft-rush, common ragwort and white clover. Some of the species, e.g. silverweed, soft-rush, brooklime are indicative of poorly-drained ground conditions (see Plate 1).

Tall Ruderal

- 3.28 Along the toe of the bund which forms the south west boundary of the 'triangular' part of the site are tall ruderal species which have started to colonise the edges of the hardstanding area. These comprise common and widespread species typical of recently disturbed ground, including abundant creeping thistle, broadleaved dock, common nettle and great willowherb and frequent to rarely occurring common ragwort, grey willow saplings and common figwort (see Plate 2 showing bund - site boundary is at the toe of bund).

Ephemeral Short Perennial

- 3.29 Ephemeral short perennial vegetation has colonised the edges of the hardstanding, most notably along the toe of the bund and in the northern part of the site and in the south east corner of the 'square' part of the site. Again, species are common and widespread and indicative of recently disturbed ground. There are no dominant species, rather all species recorded occur only occasionally to rarely throughout, some as single plants only, and the vegetation cover is sparse. Species include field horsetail, common ragwort, common cudweed, colt's-foot, selfheal, greater plantain and daisy (see Plate 3).

Protected and Notable Species

Badger

- 3.30 There was no evidence of use of the site by badger, although the adjacent bund and tree belt provide suitable foraging habitat and the bund itself provides potential opportunities for badger sett creation. There are no habitats suitable for badger within the site itself.

Bats

- 3.31 There were no trees within or immediately adjacent to the site capable of supporting roosting bats; the mature trees adjacent to the south west boundary of the 'triangular' part of the site are not sufficiently mature and lack features such as cracks, flaking bark and rot holes that would offer potential for roosting bats. This tree belt and wider area to the west of the proposed development site, e.g. the adjacent school grounds, the River Ribble and beyond provide high quality foraging habitat for bats. However, the site itself has very limited potential for bat foraging, lacking any substantial semi-natural vegetation cover. Operational buildings and structures located to the north, east and south east of the site within the wider Johnson Matthew site are unlikely to provide opportunities for bat roosting bats due to the relatively elevated levels of noise and lighting across the operational parts of the site, coupled with a lack of suitable roost features.

Breeding Birds

- 3.32 There are no habitats within the site with potential to support nesting birds, and only very limited potential for foraging by bird species due to a lack of substantive semi-natural vegetation cover. No birds were observed within the site on the day of survey.

Amphibians and Reptiles

- 3.33 There is a single pond located within c.200m to the south of the site (Plate 4). Although the pond is located within optimal terrestrial habitat for GCN, comprising woodland, scrub and grassland, the aquatic habitat within the pond was sub-optimal. This was due to the presence of abundant water fowl and fish (pers.comm. Simon Thompson) resulting in poor water quality and lack of submerged vegetation.
- 3.34 This pond was subject to a Habitat Suitability Index (HSI) assessment for GCN. The results of the HSI were a score of 0.45, which indicates that the pond has 'poor' suitability to support GCN.
- 3.35 There is no suitable habitat for GCN within the proposed development site, due to a lack of substantive vegetation cover and places of shelter.
- 3.36 The very edges of the site along the toe of the bund could potentially provide suitable habitat for reptile species such as common lizard which require a mosaic of open, sunny areas and dense cover that provide basking opportunities close to places of shelter and shade. However, the majority of the proposed development site is highly unsuitable for reptiles due to the lack of vegetation cover to provide places of shelter.

Terrestrial Invertebrates

- 3.37 The site has some features such as small patches of bare ground, some botanical species diversity and patches of grassland adjacent to tall ruderal vegetation and mature trees that could make it attractive to terrestrial invertebrates, providing sunny areas for basking and shelter for foraging. A single small white butterfly³, peacock, small tortoiseshell and painted lady were noted within the site or on the adjacent bund during the survey. However, the site is

³ Common names only are used in the text, please see Appendix 3b for scientific names.

generally lacking in significant botanical and structural diversity, features such as temporary waterbodies and scrub and habitat connectivity to other semi-natural habitats which would otherwise increase its value for terrestrial invertebrates. Overall, therefore, the site is considered to provide only very limited value for terrestrial invertebrates.

Non-native Invasive Species

- 3.38 A single plant of Himalayan balsam was recorded along the toe of the bund but promptly removed and destroyed during the survey (it had not yet set seed). No other evidence of this species was noted but the presence of one plant suggests it may be present in the wider area.

4. DISCUSSION AND RECOMMENDATIONS

Evaluation of Features and their Function for Wildlife

Designated Sites

- 4.1 There are a number of statutory and non-statutory designated sites within the wider area, the nearest being Cross Hill Quarry LNR and BHS located c.100m north of the site, which is of County-wide value for nature conservation. There is no direct habitat connectivity between the proposed development site and Cross Hill Quarry LNR/BHS and no impacts are anticipated. The LNR/BHS is also well screened from the proposed development site by the mature tree belt which runs along the south west site boundary, and no indirect disturbance effects, e.g. noise, lighting are anticipated in relation to the LNR/BHS.

Habitats

- 4.2 The vast majority of the proposed development site comprises un-vegetated bare ground. Where vegetation is present, it is typical of the relatively early stages of succession on previously disturbed land. None of the habitats were particularly notable in terms of botanical species diversity or vegetation structure and there were no notable plant species present. The site lacks the spatial variation and habitat mosaic qualities of high quality brownfield habitats and was considered to be of low ecological value, in terms of its habitats.
- 4.3 The proposed development would result in the loss of small patches of species-poor semi-improved grassland, tall ruderal vegetation and ephemeral short perennial vegetation. This is not considered to be a significant ecological impact and no mitigation is necessary.

Fauna

- 4.4 The site has very limited potential for protected or notable species due to the homogenous character of the vegetation and lack of physical structures to provide potential nesting and foraging resources or places of shelter. Its terrestrial invertebrate assemblage is likely to be limited to common and widespread species only. If reptiles are present at all, they are likely to be confined to the toe of the boundary bund on the south west of the site. This part of the site would not be affected by the proposed development.
- 4.5 An examination of aerial photography and Ordnance Survey mapping confirms that there is one pond within 500m of the proposed development site. An assessment of this single off-site pond indicates that it has 'poor' suitability for GCN and there are no suitable habitats within the site for amphibians. Similarly, the site does not provide a nesting/roosting or foraging resource for birds or bats. The adjacent bund and tree belt (both outside the site boundary) are likely to provide a good resource for foraging bats which links to the wider area.
- 4.6 Overall, the function of the site for faunal species or groups is very limited, and its value for faunal groups is considered to be very low.
- 4.7 No mitigation is considered necessary in relation to faunal species/groups, with the exception of consideration of sensitive use of lighting along the south west boundary to minimise light spill (see mitigation section below).

Mitigation Recommendations

Foraging Bats

- 4.8 It is recommended that the use of lighting along the site boundary adjacent to the bund/tree belt is kept to the minimum necessary, with use of directional or hooded/cowled lighting to minimise light spill onto the adjacent habitat corridor.

Non-native Invasive Species

- 4.9 Whilst only a single plant of Himalayan balsam was noted on site (and removed/destroyed during the survey) its presence indicates this species may occur in the wider area. Himalayan balsam is listed on Schedule 9 of the Wildlife & Countryside Act 1981 (as amended) which makes it an offence to release or allow this species to escape into the wild. It is recommended that any site contractors remain vigilant to the potential presence of this species during construction.

Further Survey Requirements

- 4.10 No further ecological surveys are considered necessary.

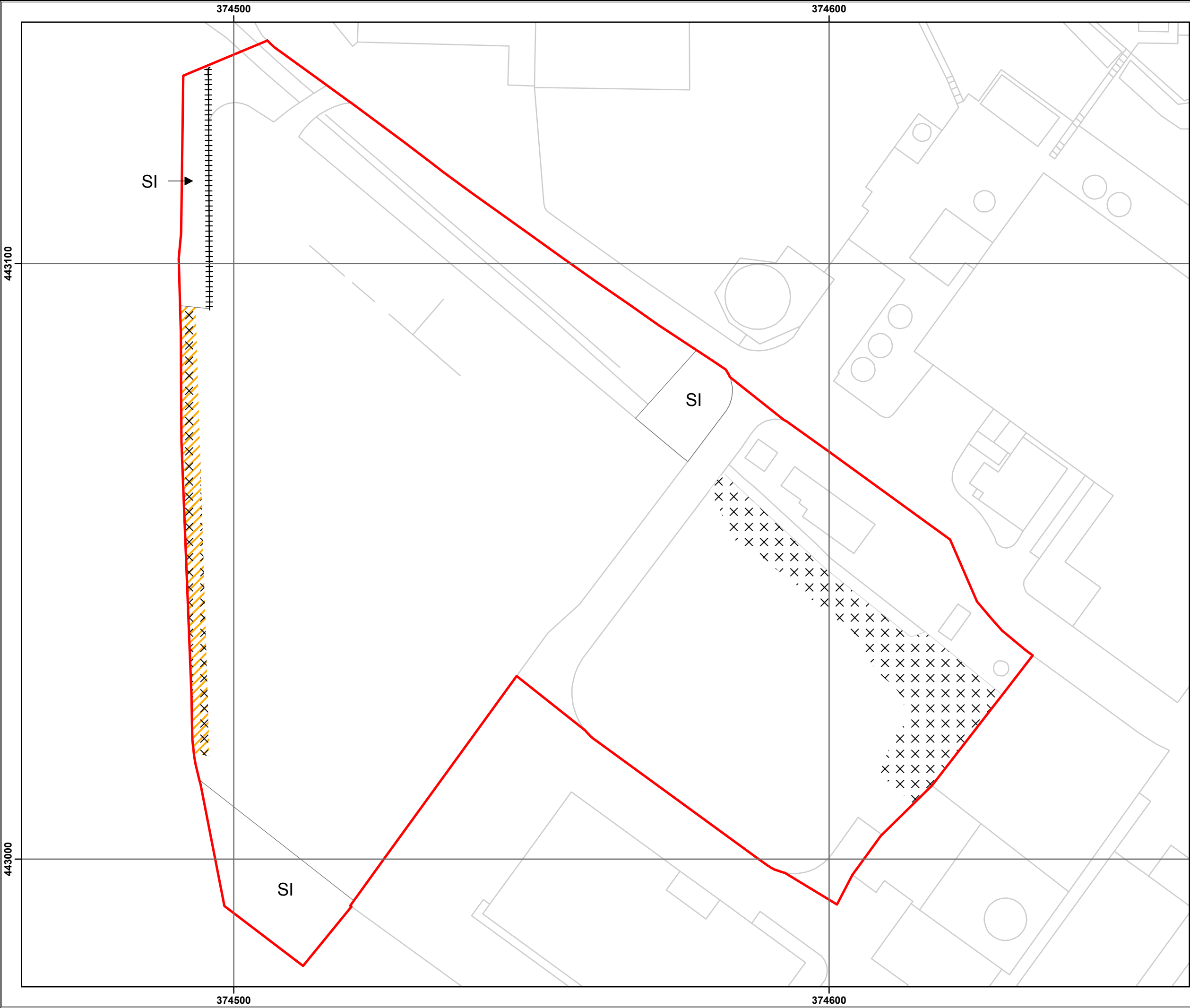
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6. ABBREVIATIONS

BHS	Biological Heritage Site/s	LNR	Local Nature Reserve
CIEEM	Chartered Institute of Ecology and Environmental Management	MAGIC	Multi-Agency Geographic Information for the Countryside
CRoW	Countryside and Rights of Way	NERC	Natural Environment and Rural Communities
EU	European Union	NPPF	National Planning Policy Framework
GCN	Great Crested Newt	PAA	Penny Anderson Associates Ltd
HSI	Habitat Suitability Index	SAC	Special Area(s) of Conservation
JNCC	Joint Nature Conservation Committee	SPA	Special Protection Area(s)
LERN	Lancashire Environmental Record Network	SSSI	Site(s) of Special Scientific Interest
		WCA	Wildlife and Countryside Act

FIGURE



Legend

- Tall ruderal/short perennial
- Species-poor semi-improved grassland
- Ephemeral/short
- perennial
- Bare ground
- Fence

British National Grid
Projection: Transverse Mercator
False Easting: 400000.000000
False Northing: -100000.000000
Central Meridian: -2.000000
Scale Factor: 0.999601
Latitude Of Origin: 49.000000

ISO A3

N

0 2.5 5 10 15 Metres

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Project Name: Clitheroe

Discipline: Ecology

Title: HABITAT SURVEY

Scale: 1:600	Drawing No. Figure 1	
Drawn By: MDM	Originator: SRS	Date: 21/08/2018
PAA Ref: G:\JACO08\Mapa\Working_Docs\	Revision: 1.0	

APPENDICES

APPENDIX 1

Legislation Summaries

SUMMARY OF THE LEGISLATION RELATING TO BADGERS AND THEIR SETTS

Badgers (*Meles meles*) are not an endangered species but have a long history of persecution and cruelty. As such, badgers and their setts are protected under the Protection of Badgers Act 1992 (as amended), which makes it illegal for any person to kill, injure or take a badger. It is also an offence to destroy, damage or obstruct a badger sett, or to disturb a badger whilst it is within a sett. There are also additional offences relating to possession of, buying and selling a dead badger, or anything derived from a badger, and causing a dog to enter a sett.

The Act defines a sett as 'any structure or place which displays signs of current use by a badger'. Setts are defined by English Nature (1995) as 'usually underground tunnel systems providing shelter for badgers, but may include other structures used by badgers such as hay bales, drainage culverts, or cellars'. 'Current use' is more difficult to define but is usually interpreted by the presence/absence of badger field signs over several observations of the sett (Natural England 2006).

Section 15 of the National Planning Policy Framework (NPPF 2018) states that the planning system should contribute to and enhance the natural and local environment by minimising impacts on biodiversity and providing net gains in biodiversity where possible. The NPPF also includes the requirement to contribute to the Government's commitment to halt the overall decline in biodiversity and to promote the reservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations, linked to national and local targets. Reference is made to Circular 06/2005 *Biodiversity and Geological Conservation - Statutory Obligations and Their Impact within the Planning System* in respect of statutory obligations for biodiversity and geodiversity conservation.

Local authorities in England are required to consider the likelihood of any proposed development adversely affecting badgers' foraging territory, or links between them, or significantly increasing the likelihood of road or rail casualties amongst badger populations. The planning guidance for Wales, Technical Advice Note (Wales) 5, identifies the need to comply with the Protection of Badgers Act 1992.

English Nature, 1995. *Species Conservation Handbook*. English Nature, Peterborough.

Natural England, 2006. *Guidance on 'Current Use' in the definition of a badger sett*. Natural England, Peterborough.

Please note: the above text provides a brief summary of the legislation in relation to badgers for England and Wales and the original Act and amendments should be referred to for the precise wording.

SUMMARY OF THE LEGISLATION RELATING TO BATS

All wild species of bat are protected under the Wildlife and Countryside Act (WCA) 1981, which has also been amended by later legislation, including the Countryside and Rights of Way (CROW) Act 2000 and the Conservation of Habitats and Species Regulations 2017, and this legislation is applicable to England and Wales. Bats are listed on Schedule 5 of the WCA and are therefore subject to some the provisions of Section 9 which, with the amendments, make it an offence to:

- Intentionally or recklessly disturb a bat while it is occupying a structure or place which it uses for shelter or protection (S9:4b).
- Intentionally or recklessly obstruct access to any structure or place used for shelter or protection by a bat (S9:4c).

There are additional offences in relation to buying and selling (S9:5) any live or dead animal of this species or anything derived from them.

Bat species are also listed under Annexes IIa and IVa of the EC Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora, also known as the 'Habitats Directive'. Inclusion on Annex IVa means they are consequently identified as European Protected Species (EPS) and protected under the Conservation of Habitats and Species Regulations 2017.

The Conservation of Habitats and Species Regulations 2017 state that a person commits an offence if they:

- (a) deliberately capture, injure or kill any wild animal of a European protected species,
- (b) deliberately disturb wild animals of any such species, in such a way as –
 - (i) to impair their ability to survive, to breed or reproduce, or to rear their young, or
 - (ii) in the case of animals of a hibernating or migratory species, to hibernate or migrate, or
 - (iii) to affect significantly the local distribution or abundance of the species to which they belong;
- (c) deliberately take or destroy the eggs of such an animal, or
- (d) damage or destroy a breeding site or resting place of such an animal.

Under these Regulations it is an offence to damage or destroy a breeding site or resting place whether the animal is in occupation or not, and protection extends to all life stages of the animal in question. There are additional offences relating to possession, control and sale of a live or dead bat or part of such an animal.

In addition, seven native British bat species, including the soprano pipistrelle (*Pipistrellus pygmaeus*) and the brown long-eared bat (*Plecotus auritus*), that are frequently found in buildings, are listed as a 'Priority Species' under the 2011 biodiversity strategy for England, *Biodiversity 2020: A strategy for England's wildlife and ecosystem services*, under the 2012 UK Post-2010 UK Biodiversity Framework. These Priority Species are also referred to as 'species of principal importance' for the conservation of biodiversity in England and Wales within Section 74 of the CROW Act 2000, and Sections 41 (England) and 42 (Wales) of the Natural Environment and Rural Communities (NERC) Act 2006.

Section 15 of the National Planning Policy Framework (NPPF 2018) states that the planning system should contribute to and enhance the natural and local environment by minimising impacts on biodiversity and providing net gains in biodiversity where possible. The NPPF also includes the requirement to contribute to the Government's commitment to halt the overall decline in biodiversity and to promote the reservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations, linked to national and local targets. Reference is made to Circular 06/2005 *Biodiversity and Geological Conservation - Statutory Obligations and Their Impact within the Planning System* in respect of statutory obligations for biodiversity and geodiversity conservation.

Local authorities in England are required to ensure that where significant harm resulting from development cannot be avoided (through locating on alternative sites with less harmful impacts),

adequately mitigated, or, as a last resort, compensated for, planning permission is refused. The commitment to preserving, restoring or enhancing biodiversity is further emphasised for England and Wales in Section 40 of the NERC Act 2006.

Please note: the above text provides a brief summary of the legislation in relation to bats in England and Wales and the original Acts, Regulations and any amendments should be referred to for the precise wording.

SUMMARY OF THE LEGISLATION RELATING TO BREEDING BIRDS

All wild species of breeding birds and their nests are protected under Part 1 of the Wildlife and Countryside Act (WCA) 1981, as amended by later legislation including the Countryside and Rights of Way (CROW) Act 2000. This legislation applies in England and Wales.

Part 1 (Section 1:1) of the WCA states that:

'If any person intentionally,

- (a) kills, injures or takes any wild bird;
- (b) takes, damages or destroys the nest of any wild bird while that nest is in use or being built; or
- (c) takes or destroys an egg of any wild bird,

he shall be guilty of an offence.'

Part 1 (Section 1:5) of the WCA (amended by the CROW Act 2000) refers to specific birds listed on Schedule 1 of the WCA, and states that:

'If any person intentionally or recklessly,

- (a) disturbs any wild bird included in Schedule 1 while it is building a nest or is in, on or near a nest containing eggs or young; or
- (b) disturbs dependent young of such a bird,

he shall be guilty of an offence and liable to a special penalty.'

Schedule 1 includes birds such as barn owl (*Tyto alba*), black redstart (*Phoenicurus ochruros*), wood lark (*Lullula arborea*) and Cetti's warbler (*Cettia cetti*). Please refer to the WCA for a complete list of Schedule 1 species.

Some provisions are made to allow the killing and taking of certain species under certain circumstances, as follows:

- Birds listed on Schedule 2 (Part 1) of the Act may be taken or killed outside of the 'close season' for each individual species (the 'close season' is defined by the Act). This includes various wild duck and geese species.
- Birds listed on Schedule 2 (Part 2) of the Act may be killed or taken by authorised persons at all times. This includes species such as carrion crow (*Corvus corone*), black-billed magpie (*Pica pica*), feral pigeon (*Columba livia*) and greater Canada goose (*Branta canadensis*). An 'authorised person' is defined as a person who has written authorisation to undertake the act from the relevant statutory authority. The written authority is in the form of a licence, either a general licence which covers a number of the more typical 'pest' species, or an individual licence for other individual species. In England these licences are issued by Natural England and in Wales by the Welsh Assembly Government.

Please note: the above text provides a brief summary of the legislation in relation to breeding birds in England and Wales and the original Act and any amendments should be referred to for the precise wording.

SUMMARY OF THE LEGISLATION RELATING TO GREAT CRESTED NEWTS (GCN)

Great crested (or warty) newts (*Triturus cristatus*) (GCN) are protected under the Wildlife and Countryside Act (WCA) 1981, which has been also amended by various legislation including the Countryside and Rights of Way (CROW) Act 2000 and the Conservation of Habitats and Species Regulations 2017, and this legislation is applicable to England and Wales. Great crested newts are listed on Schedule 5 of the WCA and are therefore subject to some the provisions of Section 9 which, with the amendments, make it an offence to:

- Intentionally or recklessly disturb a GCN while it is occupying a structure or place which it uses for shelter or protection (S9:4b).
- Intentionally or recklessly obstruct access to any structure or place used for shelter or protection by a GCN (S9:4c).

There are additional offences in relation to buying and selling (S9:5) any live or dead animal of this species or anything derived from them.

Great crested newts are also listed under Annexes IIa and IVa of EC Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora, also known as the 'Habitats Directive'. Inclusion on Annex IVa means they are consequently identified as European Protected Species (EPS) and protected under the Conservation of Habitats and Species Regulations 2017. The Conservation of Habitats and Species Regulations 2017 state that a person commits an offence if they:

- (a) deliberately capture, injure or kill any wild animal of a European protected species,
- (b) deliberately disturb wild animals of any such species, in such a way as –
 - (i) to impair their ability to survive, to breed or reproduce, or to rear their young, or
 - (ii) in the case of animals of a hibernating or migratory species, to hibernate or migrate, or
 - (iii) to affect significantly the local distribution or abundance of the species to which they belong;
- (c) deliberately take or destroy the eggs of such an animal, or
- (d) damage or destroy a breeding site or resting place of such an animal.

Under these Regulations it is an offence to damage or destroy a breeding site or resting place, whether the animal is in occupation or not, and protection extends to all life stages of the animal in question. There are additional offences relating to possession, control and sale of a live or dead GCN or part of such an animal.

In addition, GCN are listed as a 'Priority Species' under the under the 2011 biodiversity strategy for England, *Biodiversity 2020: A strategy for England's wildlife and ecosystem services*, under the 2012 UK Post-2010 UK Biodiversity Framework. These Priority Species are also referred to as 'species of principal importance' for the conservation of biodiversity. These Priority Species are also referred to as 'species of principal importance' for the conservation of biodiversity in England and Wales within Section 74 of the CROW Act 2000, and Sections 41 (England) and 42 (Wales) of the Natural Environment and Rural Communities (NERC) Act 2006. Section 15 of the National Planning Policy Framework (NPPF 2018) states that the planning system should contribute to and enhance the natural and local environment by minimising impacts on biodiversity and providing net gains in biodiversity where possible.

The NPPF also includes the requirement to contribute to the Government's commitment to halt the overall decline in biodiversity and to promote the reservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations, linked to national and local targets. Reference is made to Circular 06/2005 *Biodiversity and Geological Conservation - Statutory Obligations and Their Impact within the Planning System* in respect of statutory obligations for biodiversity and geodiversity conservation.

Local authorities in England are required to ensure that where significant harm resulting from development cannot be avoided (through locating on alternative sites with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, planning permission is refused. The commitment to preserving, restoring or enhancing biodiversity is further emphasised for England and Wales in Section 40 of the NERC Act 2006.

Please note: the above text provides a brief summary of the legislation in relation to GCN for England and Wales and the original Acts, Regulations and any amendments should be referred to for the precise wording.

SUMMARY OF THE LEGISLATION RELATING TO REPTILES

All six of the native British reptile species are afforded varying degrees of protection under the Wildlife and Countryside Act (WCA) 1981, as amended by various later legislation, and this legislation is applicable to England and Wales. All six species are listed on Schedule 5 of the WCA.

The four widespread species, common lizard (*Zootoca vivipara*), slow-worm (*Anguis fragilis*), grass snake (*Natrix natrix*) and adder (*Vipera berus*) are afforded part protection under Section 9(1), making it an offence to intentionally kill or injure any of these species of reptile. The two rarer species, sand lizard (*Lacerta agilis*) and smooth snake (*Coronella austriaca*), are subject to a greater degree of protection under Section 9(4) which, with the amendments, make it (in brief) an offence to:

- Intentionally or recklessly disturb a sand lizard or smooth snake while it is occupying a structure or place used for shelter or protection (S9:4b); or
- Intentionally or recklessly obstruct access to any structure or place a sand lizard or smooth snake uses for shelter or protection (S9:4c).

All six species are afforded protection from buying, selling or exchange under Section 9(5) of the WCA.

Sand lizard and smooth snake are also listed under Annexes IIa and IVa of EC Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora, also known as the 'Habitats Directive'. Inclusion on Annex IVa means they are consequently identified as European Protected Species (EPS) and protected under the Conservation of Habitats and Species Regulations 2017.

The Conservation of Habitats and Species Regulations 2017 state that a person commits an offence if they:

- (a) deliberately capture, injure or kill any wild animal of a European protected species,
- (b) deliberately disturb wild animals of any such species, in such a way as –
 - (i) to impair their ability to survive, to breed or reproduce, or to rear their young, or
 - (ii) in the case of animals of a hibernating or migratory species, to hibernate or migrate, or
 - (iii) to affect significantly the local distribution or abundance of the species to which they belong;
- (c) deliberately take or destroy the eggs of such an animal, or
- (d) damage or destroy a breeding site or resting place of such an animal.

Under these Regulations it is an offence to damage or destroy a breeding site or resting place whether the animal is in occupation or not, and protection extends to all life stages of the animal in question. There are additional offences relating to possession, control and sale of a live or dead sand lizard or smooth snake or part of such an animal.

In addition, all six reptile species are listed as a 'Priority Species' under the under the 2011 biodiversity strategy for England, *Biodiversity 2020: A strategy for England's wildlife and ecosystem services*, under the 2012 UK Post-2010 UK Biodiversity Framework. These Priority Species are also referred to as 'species of principal importance' for the conservation of biodiversity in England and Wales within Section 74 of the CRow Act 2000, and Sections 41 (England) and 42 (Wales) of the Natural Environment and Rural Communities (NERC) Act 2006. Section 15 of the National Planning Policy Framework (NPPF 2018) states that the planning system should contribute to and enhance the natural and local environment by minimising impacts on biodiversity and providing net gains in biodiversity where possible.

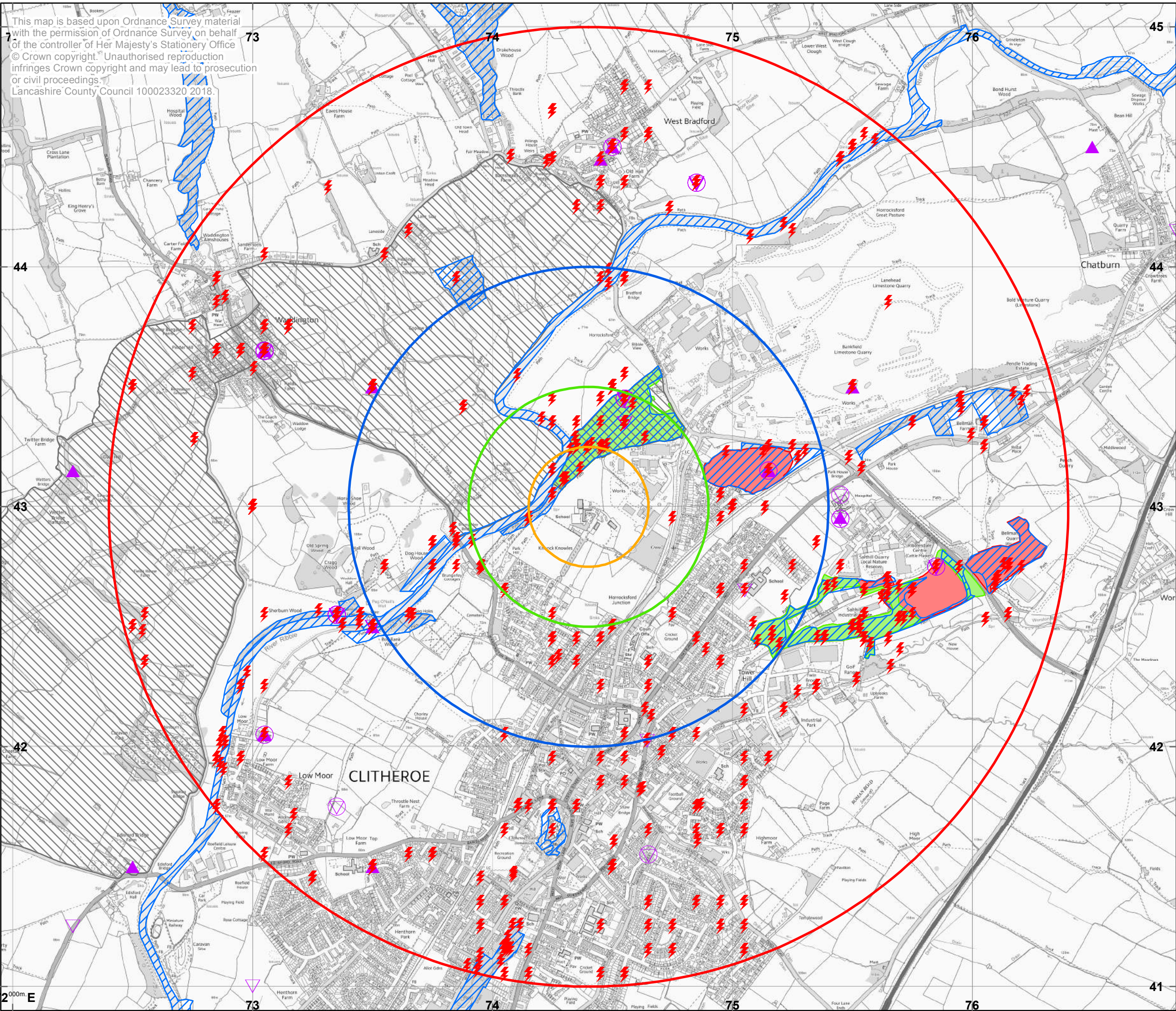
The NPPF also includes the requirement to contribute to the Government's commitment to halt the overall decline in biodiversity and to promote the reservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations, linked to national and local targets. Reference is made to Circular 06/2005 *Biodiversity and Geological Conservation - Statutory Obligations and Their Impact within the Planning System* in respect of statutory obligations for biodiversity and geodiversity conservation.

Local authorities in England are required to ensure that where significant harm resulting from development cannot be avoided (through locating on alternative sites with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, planning permission is refused. The commitment to preserving, restoring or enhancing biodiversity is further emphasised for England and Wales in Section 40 of the NERC Act 2006.

Please note: the above text provides a brief summary of the legislation in relation to reptiles for England and Wales and the original Acts, Regulations and any amendments should be referred to for the precise wording.

APPENDIX 2

Locally Designated Sites



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Lancashire County Council 100023320 2018.

Project:
Clitheroe

Client:
Penny Anderson Associates

Grid Ref: 374400 443000

Legend

250 m Buffer

500 m Buffer

1 km Buffer

2 km Buffer

Lancashire Key Species

Bat Roost or Possible Roost

Other Bat Record

SLBG Bat Roost or Possible Roost

SLBG Other Bat Record

Biological Heritage Sites

Local Geodiversity Sites

Local Nature Reserve

SSSI

**N.B. THIS IS AN INTERACTIVE PDF
LAYERS CAN BE TURNED ON OR OFF
TO AID CLARITY.**

N

Metres

01,000

1:15,000

Boundaries of statutory designations (Natura 2000, SSSI etc) are included for information only. Definitive, information for these designations should be obtained from Natural England.

Lancashire Key Species records are plotted at the centre of the area to which they relate (the precision of each record is given in the accompanying attribute data and spreadsheet).

NBN Atlas occurrence download at <https://nbnatlas.org> accessed on Fri Oct 20 12:44:41 UTC 2017. See supporting documentation for citations and further information.

Lancashire Environment Record Network
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<http://www.lancashire.gov.uk/lern.aspx>

APPENDIX 3a and 3b

Plant and Faunal Species Recorded on Site

Appendix 3a Plant Species List Recorded on Site

Common Name	Scientific Name	Species-poor Semi-improved Grassland	Ephemeral/ Short Perennial	Tall Ruderal
Woody Species				
Bramble	<i>Rubus fruticosus</i> agg.	R	R	
Butterfly-bush (seedlings)	<i>Buddleja davidii</i>	R	R	R
Downy birch	<i>Betula pubescens</i>		R	
Grey willow	<i>Salix cinerea</i>		R	R
Herbs, Grasses and Ferns				
Annual meadow-grass	<i>Poa annua</i>	R		
Black medick	<i>Medicago lupulina</i>	R	R	
Broadleaved dock	<i>Rumex obtusifolius</i>	O	R	F
Broadleaved willowherb	<i>Epilobium montanum</i>	O	O	
Brooklime	<i>Veronica beccabunga</i>	R		
Cat's-ear	<i>Hypochaeris radicata</i>		R	
Cleavers	<i>Galium aparine</i>		R	
Cock's-foot	<i>Dactylis glomerata</i>	R		
Colt's-foot	<i>Tussilago farfara</i>	R	R	R
Common bent	<i>Agrostis capillaris</i>	O		
Common cudweed	<i>Filago vulgaris</i>		R	
Common figwort	<i>Scrophularia nodosa</i>	R	R	R
Common nettle	<i>Urtica dioica</i>	R		R
Common ragwort	<i>Senecio jacobaea</i>	R	R	
Creeping bent	<i>Agrostis capillaris</i>	F		
Creeping buttercup	<i>Ranunculus repens</i>	O	R	
Creeping cinquefoil	<i>Potentilla reptans</i>	R	R	
Creeping thistle	<i>Cirsium arvense</i>	O	R	F
Daisy	<i>Bellis perennis</i>		R	
Dandelion	<i>Taraxacum officinale</i> agg.	R		
False oat-grass	<i>Arrhenatherum elatius</i>	F	R	
Field forget-me-not	<i>Myosotis arvensis</i>	R		
Field horsetail	<i>Equisetum arvense</i>		R	
Great willowherb	<i>Epilobium hirsutum</i>		R	
Greater plantain	<i>Plantago major</i>	O	R	
Hairy sedge	<i>Carex hirta</i>	R		
Hard rush	<i>Juncus inflexus</i>	R		
Heath speedwell	<i>Veronica officinalis</i>	R		
Herb-Robert	<i>Geranium robertianum</i>	O		O
Himalayan balsam	<i>Impatiens glandulifera</i>		1 plant (removed during survey)	
Hoary willowherb	<i>Epilobium parviflorum</i>	R		
Hogweed	<i>Heracleum sphondylium</i>	O		
Hop trefoil	<i>Trifolium campestre</i>	O		
Meadow foxtail	<i>Alopecurus pratensis</i>	R		
Mosses			O	
Mouse-eared chickweed	<i>Cerastium fontanum</i>	O		
Nipplewort	<i>Lapsana communis</i>		R	
Pendulous sedge	<i>Carex pendula</i>	R		
Petty spurge	<i>Euphorbia peplus</i>		R	R
Prickly sow-thistle	<i>Sonchus asper</i>	R	R	R
Red fescue	<i>Festuca rubra</i>	F	R	
Rosebay willowherb	<i>Chamerion angustifolium</i>			R
Selfheal	<i>Prunella vulgaris</i>	O	O	
Silverweed	<i>Potentilla anserina</i>	O	O	
Soft-rush	<i>Juncus effusus</i>	R		
Spear thistle	<i>Cirsium vulgare</i>			R
White clover	<i>Trifolium repens</i>	O		
Wild strawberry	<i>Fragaria vesca</i>	R	R	
Wood avens	<i>Geum urbanum</i>	R		
Yellow oat-grass	<i>Trisetum flavescens</i>	R		
Yorkshire fog	<i>Holcus lanatus</i>	F		

Key:

D = dominant
 A = abundant
 F = frequent
 O = occasional
 R = rare

Appendix 3b Fauna Recorded on Site

Common Name	Scientific Name
Butterflies	
Peacock	<i>Inachis io</i>
Painted lady	<i>Vanessa cardui</i>
Small tortoise shell	<i>Aglais urticae</i>
Small white	<i>Pieris rapae</i>

APPENDIX 4

Plates



Plate 1: Small area of species-poor semi-improved grassland in south west corner of site



Plate 2: Bare ground within the site and vegetated bund adjoining the site along the south west boundary



Plate 3: Ephemeral/short perennial vegetation colonising the edges of hard standing in the eastern part of the site



Plate 4: Pond located c. 200m south of site illustrating poor water quality and presence of waterfowl

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